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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,283	05/09/2005	Kazumasa Fujimoto	050287	2950
23850	7590	12/09/2005	EXAMINER THOMAS, ERIC W	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			ART UNIT 2831	PAPER NUMBER

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/534,283

Applicant(s)

FUJIMOTO ET AL.

Examiner

Eric Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Naraya (WO 00/19468) – see (US patent 6,515,847).

Naraya discloses a solid electrolytic capacitor comprising a capacitor element (1- as seen in '847) which includes an anode foil (3) and a cathode foil (2) rolled with a separator interposed therebetween, and a layer of a solid electrolyte provided therein (see abstract), wherein the cathode foil is coated with a film of a titanium containing compound metal nitride (see abstract).

Regarding claim 4, Naraya discloses the electrolyte provided in the capacitor element is an electrically conductive polythiophene polymer (see abstract).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

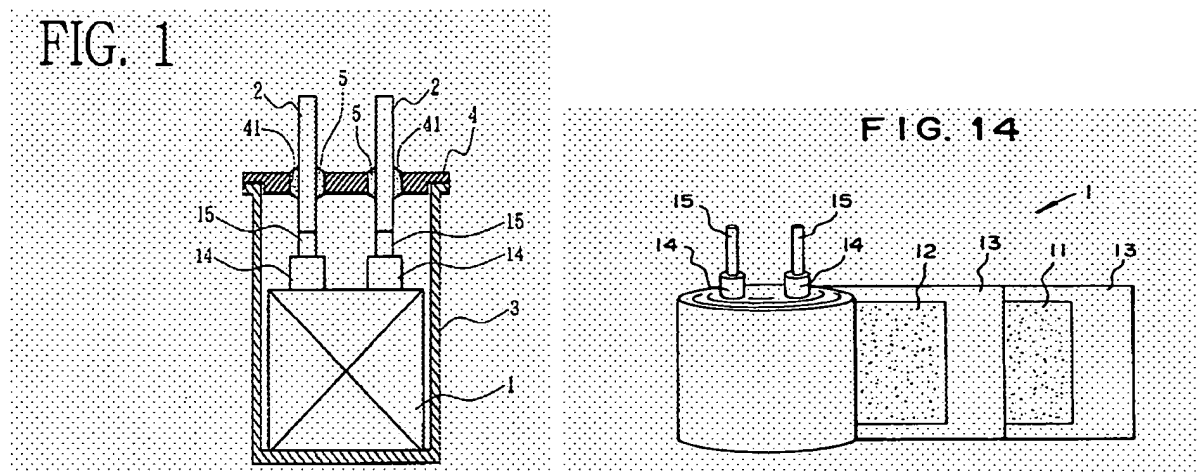
5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naraya (WO 00/19468) in view of JP 2000-152788 ('788).

Naraya discloses the claimed invention except for the titanium nitride is selected from the group consisting of aluminum titanium nitride, chromium titanium nitride, zirconium titanium nitride and titanium carbonitride.

'788 teaches ~~that~~ the use of an electrode foil coating that comprises a zirconium titanium nitride (see paragraph 9). - ET 12/9/05

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the cathode coating from a zirconium titanium nitride, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

6. Claims 1, 2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (US 6,052,273) in view of JP 04-071214 ('214).



Inoue et al. disclose in fig. 1-2, 14 ~~discloses~~ a solid electrolytic capacitor comprising a capacitor element (1) which includes an anode foil (11) and a cathode foil (12) rolled with a separator (13) interposed therebetween, and a layer of a solid electrolyte provided therein, wherein the cathode foil is formed from aluminum.

-ET 1/16/05

Inoue et al. disclose the claimed invention except for the cathode foil is coated with a film of a titanium-containing compound metal nitride.

'214 teaches the use of a film coating formed on a cathode aluminum foil, wherein the film comprises a carbon nitride of titanium.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form a film coating comprising TiCN on the cathode foil of Inoue et al., since such a modification improve the electrical properties (capacitance) of the capacitor.

Regarding claim 2, Inoue et al. disclose the electrolyte provided in the capacitor element is an electrically conductive polythiophene polymer (see col. 15 lines 50-60).

7. Claims 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (US 6,052,273) in view of Ryazantsev et al. (EP 0 905 274).



FIG. 14

Ryazantsev et al. teach an improve cathode used in capacitors, wherein the cathode comprises an aluminum foil having a coating of titanium nitride film form thereon, and the film further comprises a titanium layer underlying the titanium nitride layer.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modified the capacitor of Inoue et al. by forming a titanium nitride film coating on the cathode, wherein the film further comprises a titanium layer underlying the titanium nitride layer, since such a modification would reduce the electrical resistance of the cathode.

Regarding claim 5, Inoue et al. disclose the electrolyte is polythiophene polymer.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:45 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ewt

  
ERIC W. THOMAS  
PRIMARY EXAMINER 12-6-05